

IN THE CLAIMS:

Please amend the claims as follows:

1. (Original) A method in a time division duplex mobile communication network comprising the steps of:

estimating a propagation delay between a base station and a plurality of mobile stations in the time division duplex mobile communication network;

arranging time slots in a frame in the time division duplex mobile communication network so that if the propagation delay between the base station and a first mobile station is less than the propagation delay between the base station and a second mobile station, the first mobile station is permitted to transmit in a time slot before the time slot of the second mobile station in the frame; and

where the frame has a guard time between transmissions from the base station to the mobile stations and transmissions received by the base station from the mobile stations, setting the guard time in the frame to a value based on the propagation delay between the base station and the first mobile station.

2. (Original) The method of claim 1 further comprising the step of transmitting messages to the mobile stations including information specifying the frame for each mobile station.

3. (Original) The method of claim 1 wherein the frame in the time division duplex communication system comprises an uplink superframe and a downlink superframe, the uplink superframe further comprising a plurality of uplink time slots for the plurality of mobile stations.

4. (Original) The method of claim 1 wherein the value of the guard time is based on a round trip propagation delay between the base station and the first mobile station.

5. (Original) The method of claim 1 wherein the value of the guard time is based on a two times a single trip propagation delay between the base station and the first mobile station.

6. (Original) The method of claim 1 wherein the first mobile station is closer to the base station than the other mobile stations.

7. (Currently Amended) A method of operating a base station in a time division duplex mobile communication network comprising the steps of:

transmitting in a downlink superframe, the downlink superframe further comprising a plurality of downlink time slots, each downlink time slot allocated to a mobile station in the time division duplex communication network;

waiting a guard time interval, the guard time interval being set to a value based on at least equal to or greater than a round-trip propagation delay between the base station and a first mobile station; and

receiving uplink transmissions in an uplink superframe, the uplink superframe further comprising a plurality of uplink time slots, each uplink time slot allocated to a mobile station in the time division duplex communication network, the uplink time slots arranged so that a first uplink time slot at the beginning of the uplink superframe is allocated to the first mobile station, the first mobile station selected so that the round-trip propagation delay between the base station and the first mobile station is shorter than at least one other mobile station in the time division duplex communication network.

8. (Original) The method of claim 7 wherein the first mobile station has a shorter round-trip propagation delay to the base station than the other mobile stations in the time division duplex communication network.

9.-11. (Canceled)

12. (New) A system in a time division duplex mobile communication network comprising:

means for estimating a propagation delay between a base station and a plurality of mobile stations in the time division duplex mobile communication network;

means for arranging time slots in a frame in the time division duplex mobile communication network so that if the propagation delay between the base station and a first mobile station is less than the propagation delay between the base station and a second mobile station, the first mobile station is permitted to transmit in a time slot before the time slot of the second mobile station in the frame; and

where the frame has a guard time between transmissions from the base station to the mobile stations and transmissions received by the base station from the mobile stations, means for setting the guard time in the frame to a value based on the propagation delay between the base station and the first mobile station.

13. (New) The system of claim 12 further comprising means for transmitting messages to the mobile stations which includes information specifying the frame for each mobile station.

14. (New) The system of claim 12 wherein the frame in the time division duplex communication system comprises an uplink superframe and a downlink superframe, the uplink superframe further comprising a plurality of uplink time slots for the plurality of mobile stations.

15. (New) The system of claim 12 wherein the value of the guard time is based on a round trip propagation delay between the base station and the first mobile station.

16. (New) The system of claim 1 wherein the value of the guard time is based on a two times a single trip propagation delay between the base station and the first mobile station.

17. (New) The system of claim 1 wherein the first mobile station is closer to the base station than the other mobile stations.